Week 11 Lecture 1

November 6, 2017

- **Stretch 75 (Pg. 110):**

  - **Solution:** There is no remaining dollar! Here is a complete accounting of the money by source: Guests: Each spent a net of $9 for a total of $27 Hotel: The manager has $25 and the bellboy has $2, for a total of $27 It makes no sense to add what the bellboy kept to what the guests ultimately paid.

- **Stretch 76 (Pg. 111):**

  - **Solution:** That one bottle is completely empty and one still has some pills in it is a red herring. Since one bottle is completely empty, the "known" pills are of little use to you. The solution is to pick up all 40 pills, grind them up into a fine powder and use the fancy pharmaceutical scale to measure exactly $1/20$ of the total, which will contain exactly one pill of each.

- **Trouble With Tribbles (Pg. 142):**

  - **Solution:** This is another Fibonacci sequence problem. If you assume a number of tribbles initially, just find out which Fibonacci number is the first to exceed it and go back that many time periods until there was just one tribble.

- **Homework: House Hunt (Pg. 125)**